

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
 HASELTINE LAKE
 Attn. Giles, Ashley S.
 Imperial House, 15-19 Kingsway
 London WC2B 6UD
 UNITED KINGDOM

02 JUL 2004

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing (day/month/year)	02/07/2004
Applicant's or agent's file reference P83513PC00	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/GB 03/04695	International filing date (day/month/year) 03/11/2003
Applicant DYNAMIC PROCESSING SOLUTIONS PLC	

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland
 Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.


☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5618 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer John Berry
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Form PCT/ISA/220 (July 1998)

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PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference P83513PC00	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 03/04695	International filing date (day/month/year) 03/11/2003	(Earliest) Priority Date (day/month/year) 05/11/2002
Applicant DYNAMIC PROCESSING SOLUTIONS PLC		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 08 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ Certain claims were found unsearchable (See Box I).
3. ☒ Unity of invention is lacking (see Box II).

4. With regard to the title,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established by this Authority to read as follows:

APPARATUS AND METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS FROM AN OPEN VESSEL INTO A CLOSED VESSEL

5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 36.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- ☒ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- 1 ☐ None of the figures.

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national application No.
PCT/GB 03/04695

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-5, 19

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5,19

APPARATUS FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS,
WHEREIN THE FLUIDISING APPARATUS COMPRISES A FLOW CHAMBER

2. claims: 6,7

APPARATUS FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS,
WHEREIN RATE OR CONCENTRATION CONTROL MEANS ARE PROVIDED

3. claims: 8-18,22-25,27

APPARATUS AND METHOD FOR TRANSFERRING SETTLED OR SUSPENDED
SOLIDS, WHEREIN THE SUSPENDED SOLIDS OF THE CLOSED VESSEL
ARE TRANSFERRED TO A TRANSPORT VESSEL

4. claim: 20

METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS, WHEREIN
THE FLUID IS DRAWN FROM THE CLOSED VESSEL TO THE OPEN VESSEL
BY MEANS OF A PUMP OR COMPRESSOR

5. claims: 21,26

METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS, WHEREIN
THE FLUID IS RECIRCULATED BETWEEN THE CLOSED VESSEL AND THE
OPEN VESSEL

6. claims: 28, 29

METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS, WHEREIN
MATERIAL IS REMOVED FROM THE SEA BED

7. claim: 30

METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS, WHEREIN
RADIOACTIVE WASTE SOLIDS ARE REMOVED FROM STORAGE PONDS OR
TANKS

8. claim: 31

METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS, WHEREIN
MATERIAL DEPOSITED AT THE BASE OF A MINE SHAFT IS CONVEYED
TO A TRANSPORT VESSEL

International Application PCT/ GB 03/ 04695

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

9. claim: 32

METHOD FOR TRANSFERRING SETTLED OR SUSPENDED SOLIDS, WHEREIN
A MATERIAL IS DIRECTLY CONVEYED INTO THE SUCTION LINE OF A
SLURRY PUMP AT CONCENTRATIONS AND/OR PRESSURES MATCHED TO
THE PUMP'S CHARACTERISTICS

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International application No.

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Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

Apparatus for transferring settled or suspended solids from an open vessel (4) into a closed vessel (6), the apparatus comprising a suction line (22) which extends from the closed vessel (6) to the open vessel (4) via drive means (24), such as a pump or compressor, and a solids feed line (26) which extends from a solids outlet (18) in the open vessel (4) to a solids inlet in the closed vessel (6), a fluidising apparatus (10) being provided to fluidise the solids in the open vessel (4).

INTERNATIONAL SEARCH REPORT

Inter national Application No
PCT/GB 03/04695

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65G53/30 /093

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B65G B08B E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

~~EPO-Internal~~

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 010 538 A (CLEMENT EVANS RONALD) 6 August 1935 (1935-08-06)	1,19
Y	page 1, left-hand column, line 5 - line 13; figures 24,25,27 page 3, right-hand column, line 65 - line 75	2-5
Y	----- US 4 721 126 A (HORII KIYOSHI) 26 January 1988 (1988-01-26) column 1, line 6 - line 12; figure 1 column 6, line 7 - line 62	2-5
X	----- CA 2 315 670 A (C FER TECHNOLOGIES 1999 INC) 11 February 2002 (2002-02-11)	1,19
Y	page 4, paragraph 2 - page 5, paragraph 1; figures 1,2	2-5
	----- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

13 February 2004

Date of mailing of the international search report

02. 07. 2004

Name and mailing address of the ISA

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Authorized officer

Schneider, M

INTERNATIONAL SEARCH REPORT

Int. Patent Application No
PCT/GB 03/04695

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 033 545 A (SUDOL TAD A) 23 July 1991 (1991-07-23) column 5, line 37 - line 60; figures 5,5A -----	2-5
X	US 5 167 841 A (MIMS KEN) 1 December 1992 (1992-12-01) column 1, line 36 - column 2, line 13; figures 1-3 -----	1,19
X	US 4 707 277 A (MIMS KEN) 17 November 1987 (1987-11-17) column 9, line 4 - line 43; figures 1-3 -----	1,19
X	DE 17 56 836 A (HOELTER HEINZ) 27 August 1970 (1970-08-27) page 1, paragraph 1 - page 3, paragraph 1; figure 1 -----	1,19
X	US 3 993 146 A (MILLER WILLIAM J ET AL) 23 November 1976 (1976-11-23) column 1, line 51 - column 2, line 8; figures 1,2 -----	1,19

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/04695

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010538	A	06-08-1935	NONE
US 4721126	A	26-01-1988	JP 1942506 C 23-06-1995 JP 6060640 B 10-08-1994 JP 62058100 A 13-03-1987 AU 586498 B2 13-07-1989 AU 6239986 A 12-03-1987 CA 1260800 A1 26-09-1989 DE 3630536 A1 23-04-1987 FR 2587066 A1 13-03-1987 GB 2180957 A , B 08-04-1987
CA 2315870	A	11-02-2002	CA 2315870 A1 11-02-2002
US 5033545	A	23-07-1991	CA 1325969 C 11-01-1994
US 5167841	A	01-12-1992	US 4707277 A 17-11-1987 US 5244308 A 14-09-1993 US 4818419 A 04-04-1989
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DE 1756836	A	27-08-1970	DE 1756836 A1 27-08-1970
US 3993146	A	23-11-1976	US 3874733 A 01-04-1975 CA 1017368 A1 13-09-1977

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